REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Status of Claims:

No claims are currently being canceled.

Claims 1, 4 and 9 are currently being amended. Support for the amendments made to claims 1 and 9 may be found, for example, on page 3, lines 18-19 of the specification. The amendment made to claim 4 is minor in nature and does not affect the scope of that claim.

Claims 10-13 are currently being added.

This amendment amends and adds claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claims remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 1-13 are now pending in this application.

Specification Amendments:

The specification has been amended to correct minor grammatical errors. No new matter has been added.

Claim Rejections – Prior Art:

In the Office Action, claims 1 and 2 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,693,604 to Washiro et al.; claim 3 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Washiro; and claims 4-9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Washiro in view of U.S. Patent Publication No. 2004/0125029 to Maoz et al. These rejections are traversed with respect to the presently pending claims under rejection, for at least the reasons given below.

According to the present invention as recited in presently pending independent claims 1 and 9, a mobile phone antenna includes a second conductive radiation element that functions as a ground. Also, the second conductive radiation element is formed in a sheet metal as a first conductive radiation element.

Thus, the radiation element (see element 10 in Figures 2A-2C of the drawings, for example) has, by itself, a function needed to operate as an antenna by the first and second radiation elements 11, 13. Therefore, it is not necessary to provide a board ground or an LCD ground under the antenna. See page 6, lines 9-13 of the specification.

Because of this, it is not necessary to raise the conductive radiation element from the ground. Hence, the antenna can offer a broadened bandwidth and prevent displacement in resonance frequency. See page 3, lines 22-25 of the specification.

Washiro et al. discloses an antenna conductor 14 having a first meander part 14a and a second meander part 14b, which are formed on the plane of an antenna conductor 14. However, neither the first meander part 14a nor the second meander part 14b functions as a ground. Furthermore, Washiro et al. does not disclose or suggest any member, which can function as a ground, on the plane of the antenna conductor 14. Meanwhile, although page 3 of the Office Action states that "a ground (26) that is connected through a conductive ground connector (24) with said second conductive radiation element (10) (see fig. 2A)", it is not true that element (24) corresponds to the conductive ground connector, since Washiro et al. describes "a feeder line 24" on column 3, line 67 of that reference. A feeder line does not correspond to a conductive ground connector.

With respect to the Maoz et al. reference, that reference does not disclose or suggest any member which can function as a ground on the plane of an antenna conductor, and therefore Maoz et al. does not rectify the above-mentioned shortcomings of Washiro et al.

Accordingly, all of the presently pending claims are believed to patentably distinguish over the cited art of record.

New Claims:

New claims 10-13 have been added to recite additional features of the present invention that are believed to patentably distinguish over the cited art of record. For example, new claims 10 and 13 recite that the conductive inter-ground connector has a first bend portion at a first end thereof, a straight middle portion, and a second bend portion at a second end thereof, and wherein the first bend portion is directly connected to the first ground and the second bend portion is directly connected to said second ground. These features can be seen, for example, in Figure 2B of the drawings, whereby inter-board ground connector 41 has two bends at the end parts thereof. Such a ground connector is not disclosed or suggested

by Moaz's basic flexible connector within region 117 in Figures 11a and 11b of that reference.

New claim 12 recites that the third conductive radiation element has an L-shape that is inverted with respect to said first conductive radiation element that also has an L-shape, whereby these features can be seen, for example, by way of element 14 in Figure 4B of the drawings. Washiro's radiation element 14c in Figures 8 and 9 of that reference does not have such an inverted L-shape.

Conclusion:

Since all of the issues raised in the Office Action have been addressed in this Amendment and Reply, Applicants believe that the present application is now in condition for allowance, and an early indication of allowance is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorize payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date April 13, 2005 By Phillip J. Articola

FOLEY & LARDNER LLP
Customer Number: 22428
Telephone: (202) 672-5426
Facsimile: (202) 672-5399

Glenn Law
Registration No. 34,371

Phillip J. Articola
Registration No. 38,819